

- 1/1 - (C) WPI / DERWENT  
AN - 2001-538891 [60]  
AP - JP19990317904 19991109  
PR - JP19990317904 19991109  
TI - Fuel modifier has catalyst layers for converting heating gas of methane and water vapor to hydrogen rich gas, porous ceramic heating tube adjoining layers and header and outlet part for collecting carbon dioxide  
IW - FUEL MODIFIED CATALYST LAYER CONVERT HEAT GAS METHANE WATER HYDROGEN RICH GAS POROUS CERAMIC HEAT TUBE ADJOIN LAYER HEADER OUTLET PART COLLECT CARBON  
PA - (TOKE ) TOSHIBA KK  
PN - JP2001139304 A 20010522 DW200160 C01B3/38 005pp  
IC - C01B3/38 ; C01B3/56 ; H01M8/06  
AB - JP2001139304 NOVELTY - The modifier has sealed part filled with modification catalyst layers which convert heating gas (I) containing methane and water vapor to hydrogen rich gas, heating tube made of porous ceramic substance of zirconite adjoining partitions divided by catalyst layers for heating gas (I). Header in sealed part supplies heat carrier to heating tube and another header and outlet collects carbon dioxide.
- DETAILED DESCRIPTION - The modifier has a inlet part which supplies heating gas containing mixture of methane and water vapor to the partitions divided by the modification catalyst layer filled in sealed part. The heating tube made of porous ceramic substance of zirconite through which heat carrier passes, for permeating only carbon dioxide, is arranged to adjoining partition. The header is provided in sealed part and circulates a heat carrier to each heating tube. The heating gas is heated in the heating tube in the presence of carrier and catalyst converts heating gas into a hydrogen-rich gas. Another header provided in sealed part and outlet part collect obtained carbon dioxide.
  - USE - For formation of hydrogen rich gas from methane and water vapor and for collection of carbon dioxide separately.
  - ADVANTAGE - Since carbon dioxide is not released and is collected separately by modifier, global warming caused by carbon dioxide released into atmosphere is reduced. The modifier sets the temperature of the waste gas as heating source ejected from gas turbines to 600 deg. C.
  - (Dwg.0/5)